

## CLAIMS

1. A method for producing a hematopoietic stem cell or a vascular endothelial precursor cell, wherein the method comprises the steps of:
  - 5 (1) separating a PCLP1-positive cell from a hematopoietic tissue of an individual;
  - (2) inducing a hematopoietic stem cell or a vascular endothelial precursor cell by culturing the PCLP1-positive cell; and
  - (3) collecting the hematopoietic stem cell or vascular endothelial precursor cell from the culture of (2).
- 10 2. The method of claim 1, wherein the PCLP1-positive cell is a c-Kit-positive cell, and the method comprises the step of collecting the hematopoietic stem cell.
- 15 3. The method of claim 1, wherein the PCLP1-positive cell is an erythroblast cell surface antigen-negative cell, and the method comprises the step of collecting the vascular endothelial precursor cell.
4. The method of claim 3, wherein the PCLP1-positive cell is an erythroblast cell surface antigen-negative and CD45-negative cell.
- 20 5. The method of claim 1, wherein the hematopoietic tissue is bone marrow.
6. The method of claim 5, which comprises the step of collecting a vascular endothelial precursor cell.
- 25 7. The method of claim 5, which comprises the step of collecting a hematopoietic stem cell.
8. The method of claim 5, wherein the PCLP1-positive cell is a CD34-positive cell.
- 30 9. The method of claim 1, wherein the hematopoietic tissue is spleen tissue.
10. The method of claim 9, which comprises the step of collecting a vascular endothelial precursor cell.
- 35 11. The method of claim 9, which comprises the step of collecting a hematopoietic stem cell.

12. The method of claim 1, wherein step (2) is the step of co-culturing a PCLP1-positive cell with a stromal cell.

13. The method of claim 12, wherein a PCLP1-positive cell and a stromal cell are co-cultured  
5 in the presence of oncostatin M (OSM), basic fibroblast growth factor (bFGF), and stem cell factor (SCF).

14. The method of claim 1, wherein step (2) is the step of culturing a PCLP1-positive cell in the presence of a humoral factor present in the culture of a stromal cell.  
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15. A hematopoietic stem cell or vascular endothelial precursor cell produced by the method of claim 1.

16. A kit for producing a hematopoietic stem cell or a vascular endothelial precursor cell,  
15 wherein the kit comprises the following elements:

- (a) a reagent for detecting the level of PCLP1 expression; and
- (b) a medium for culturing a PCLP1-positive cell.

17. The kit of claim 16, which additionally comprises (c) a stromal cell.  
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18. The kit of claim 16, which additionally comprises (d) a reagent for detecting the level of expression of at least one cell surface antigen selected from the group consisting of an erythroblast cell surface antigen, CD45, and CD34.

25 19. A method for treating a disease caused by a hematopoietic cell deficiency, wherein the method comprises the step of administering a hematopoietic stem cell obtained by the method of claim 1.

20. A method for supplementing a blood cell, which comprises the step of administering a  
30 hematopoietic stem cell obtained by the method of claim 1.

21. A method for treating a vascular disease, which comprises the step of administering a vascular endothelial precursor cell obtained by the method of claim 1.

35 22. A method for detecting a regulatory effect of a test substance on angiogenic activity, wherein the method comprises the steps of:

- (1) culturing a vascular endothelial precursor cell obtained by the method of claim 1 with a test substance;
  - (2) observing the level of growth of the vascular endothelial precursor cell; and
  - (3) detecting the regulatory effect of the test substance on angiogenic activity when the level of growth is found to differ from that of a control.
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23. The method of claim 22, wherein an inhibitory effect on angiogenesis is detected when the level of growth is decreased.
- 10 24. The method of claim 22, wherein an accelerating effect on angiogenesis is detected when the level of growth is increased.
25. A method of screening for a substance with a regulatory effect on angiogenic activity, wherein the method comprises the steps of:
- 15 (1) detecting the regulatory effect of a test substance on angiogenic activity as per the method of claim 22; and
- (2) selecting a test substance that has a regulatory effect on angiogenic activity.
26. An inhibitor or accelerator of angiogenesis, which comprises a substance selected by the
- 20 method of claim 25 as an active ingredient.
27. An anticancer agent against a cancer cell caused by angiogenesis, wherein the agent comprises, as an active ingredient, a substance with an inhibitory effect on angiogenic activity, where the substance has been selected by the method of claim 25.
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28. A kit for detecting a regulatory effect on angiogenic activity, wherein the kit comprises the following elements:
- a) a vascular endothelial precursor cell obtained by the method of claim 1; and
  - b) a medium for culturing the cell of a).
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